

**NEVADA DIVISION OF ENVIRONMENTAL PROTECTION**  
**FACT SHEET**  
(pursuant to NAC 445A.236)

**Permittee Name:** Horizon Academy  
1472 South Highway 373  
HCR 70 Box 531  
Amargosa Valley, Nevada 89020

**Permittee Location:** Intersection of Highway 373 and Mecca Road  
1472 South Highway 373  
Amargosa Valley, Nye County, Nevada 89020

Latitude: 36°29'49"N, Longitude: 116°25'28" W

SE¼ SW¼ Section 2, T.17S., R.49E., MDB&M  
Elevation 2000 feet above mean sea level (msl)

**Permit Number:** NEV20011 - Renewal, flow modification

**General**

The Permittee proposes to renew the existing Groundwater Permit NEV20011, and to increase flow from the current flow of 0.0034 MGD to the design flow of 0.020 MGD. The extended aeration Marolf (Marwood) package wastewater treatment plant is designed to treat wastewater to meet secondary treatment standards with denitrification. Disposal of effluent is to two rapid infiltration basins (RIBs). Effluent denitrification is now required due to the proximity of the system to drinking water supply wells for the facility.

**Background-History** - The plant was originally installed and permitted in approximately 1981 to 1983 by Mountain View Homes, Incorporated as part of the Olde Amargosa project. A site inspection report dated September 25, 1989 indicated that the treatment system was essentially abandoned at that time, and the associated buildings (apartments, shopping center, and ancillary community services facilities) were boarded up. The disposal ponds were reportedly dry, and the property was fenced and locked.

In 1992, Mountain View Homes sold the subject property, and by approximately April 1993, renewed interest in the area resurrected the intended use of the wastewater treatment system. A change of ownership occurred in December 2004 and the property has since been converted to the Horizon Academy, a private boarding school and educational facility .

**Receiving Water Characteristics:**

Depth to groundwater in the vicinity of the treatment system and evaporation ponds has been reported to be approximately 90 to 120 feet below ground surface corresponding to approximately 2,180 to 2,210 feet above msl. General groundwater flow direction has been interpreted to be in a southerly direction.

Potable water is supplied by two (2) drinking water wells sited approximately 75 feet apart and located approximately 360 feet southeast of the treatment system. Both wells are reportedly constructed with screened intervals intercepting groundwater at approximately 400 feet depth. A monitoring well will be installed downgradient of the rapid infiltration basins

Historic groundwater monitoring data has been obtained from samples collected from the potable drinking water well(s).

**Description of the Location of the Discharge:**

Denitrified wastewater is discharged from the package treatment plant over a "V" notch weir where effluent flow is measured. From the weir the effluent is directed to two RIB#s in series for disposal via infiltration. The RIBs are fenced, posted, and secured with a locked gate.

There is a 'reuse' option in the permit pending review and approval by the Division and the preparation and approval of a mini Effluent Management Plan (EMP) for that proposed reuse irrigation.

**Characteristics**

Fecal Coliform concentrations will be monitored when and if treated effluent is reused for irrigation in accordance with the permit and mini EMP.

In the past groundwater monitoring for nitrate concentration has occurred at the potable drinking water well(s) located approximately 360 feet southeast of the pond system. A new monitoring well is being installed downgradient of the RIBs to better characterize groundwater quality in proximity of the RIBs. All three wells will be used to monitor water quality in the area near the plant.

Both the treatment and drinking water systems have been in operation for over 10 years without operating upsets and have been producing high quality discharges.

**Flow:**

The treatment facility and RIBs have been rehabilitated and have approved for the design capacity of 20,000 gpd (0.020 MGD).

**Limitations**

Effluent discharge parameters shall be monitored and maintained in accordance with the following limitations::

**EFFLUENT MONITORING**

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30 - Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow: <sup>1, 2</sup>	0.020 MGD	M & R	Continuous	Hour Meter/ Calculate
BOD <sub>5</sub> :	30 mg/L	45 mg/L	Quarterly	Discrete
Total Suspended Solids (TSS)	30 mg/L	45 mg/L	Quarterly	Discrete
Nitrate as Nitrogen	Monitor & Report		Quarterly	Discrete
Total Nitrogen as N:	10 mg/L	M & R	Quarterly	Discrete

Fecal Coliform: *	2.2 CFU /100 ml	23 CFU/100 ml	Monthly	Discrete
pH (Standard Units)	6-9		Quarterly	Discrete

gpd: Gallons per day  
mg/L: milligrams per liter

MGD: million gallons per day  
ml: milliliter

CFU: Colony Forming Units  
M & R: Monitor & Report

- <sup>1</sup> Weekly readings of the influent grinder pump timer and conversion to gallons per day will satisfy this permit condition; and
- <sup>2</sup> Effluent flow to be calculated at the "V" notch weir prior to disposal or reuse.

- **Monitoring for fecal coliform is only required when approved effluent reuse is conducted.**
  - a. The RIBs shall be visually inspected each week to verify sufficient freeboard.
  - b. When the current flow rates exceed 5,000 gallons per day, the system shall be operated by a Grade III Certified Operator.

Groundwater quality shall be monitored at the new monitoring well downgradient of the RIBS, and at the two drinking water well as specified below:

#### **GROUNDWATER MONITORING**

<u>PARAMETER</u>	<u>MAXIMUM Threshold Limitations</u>	<u>Frequency (Monitor &amp; Report)</u>	<u>SAMPLE TYPE</u>
Depth to Groundwater (Feet)	Monitor & Report	Quarterly	Discrete
Groundwater Elevation	Monitor & Report	Quarterly	Calculate
TDS:	Monitor & Report	Quarterly	Discrete
Chlorides	Monitor & Report	Quarterly	Discrete
Total Nitrogen as N	10.0 mg/L	Quarterly	Discrete
Nitrate as N: mg/L	Monitor & Report	Quarterly	Discrete

- a. Groundwater samples shall be collected on a quarterly basis and analyzed for nitrate concentration. Groundwater sampling protocol shall be in accordance with generally accepted methods.
- b. If the nitrate as nitrogen concentration reaches 7 mg/L, an initial plan for controlling and reducing nitrate levels shall be developed. If the nitrate as nitrogen concentration should reach 9 mg/L, plans for an alternate method of disposal and or enhanced treatment shall be submitted to the Nevada Division of Environmental Protection (Division). If the nitrate as nitrogen level should reach 10 mg/L, discharge to the RIBs must terminate.

#### **Procedures for Public Comment:**

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to the groundwater of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Las Vegas Review Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of

the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

**Schedule of Compliance and Special Conditions:**

The Permittee shall implement and comply with the provisions of the Schedule of Compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the Permit;
- b. The Permittee shall provide the Division with a Certification by a Nevada Registered Professional Engineer (P.E.) that the monitoring well was constructed in accordance with the plans approved by the Division, to be submitted within 30-days of construction completion.
- c. When effluent reuse is planned for irrigation, a mini Effluent Management Plan shall be prepared by a Nevada Registered Professional Engineer and shall be submitted to NDEP for review and approval, to the address listed on the permit on page 7.

**Proposed Determination**

The Division has made the tentative determination to re-issue the proposed permit for a period of 5 years.

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